

CLAIMS

1. A semiconductor device comprising:

a semiconductor chip;

an external connection electrode connected to the chip; and

a resin package which covers the chip and has a mounting surface;

wherein the electrode includes a thick portion and a thin portion, the thick portion being exposed to outside at the mounting surface of the package.

2. The semiconductor device according to claim 1, wherein the electrode has a flat upper surface for mounting the chip, the thick portion including a downward projection extending from the upper surface to the mounting surface of the package.

3. The semiconductor device according to claim 2, wherein the projection includes an end surface exposed to outside at the mounting surface of the package and side surfaces closely covered with the package.

4. The semiconductor device according to claim 1, wherein the thick portion and the thin portion are formed of a same material and integral with each other.

5. The semiconductor device according to claim 1, wherein the

electrode includes two thick portions spaced from each other and a thin portion connecting the thick portions, both of the two thick portions being exposed to outside at the mounting surface of the package.

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6. The semiconductor device according to claim 1, wherein the package includes a side surface different from the mounting surface, the thin portion including a horizontal extension exposed to outside at the side surface of the package.

7. The semiconductor device according to claim 6, wherein the horizontal extension is spaced from the mounting surface of the package.

8. The semiconductor device according to claim 1, further including an additional electrode separate from the external connection electrode, the additional electrode including a thick portion and a thin portion, the thick portion of the additional electrode being exposed to outside at the mounting surface of the package.

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9. The semiconductor device according to claim 8, wherein the external connection electrode includes a first flat surface for mounting the chip, the additional electrode including a second flat surface for connection to the chip via a wire, the first surface and the second surface being flush with each other.

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10. A lead frame for making a semiconductor device, the frame

comprising:

a plurality of thick portions which are equal in thickness to each other;

a plurality of thin portions which are equal in thickness to each other; and

a plurality of openings.

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